

What is claimed is:

1. A system for processing signals, comprising:

a multiplexer, the multiplexer having a first interface to a plurality of broadband signal inputs and a second interface to a bus, the multiplexer multiplexing the broadband signal inputs according to a frequency allocation associating each of the broadband signal inputs with an assigned frequency; and

at least a first receiver unit, the first receiver unit communicating with the bus and decoding the multiplexed broadband signal inputs for communication with a data network.

2. The system of claim 1, further comprising a second receiver unit, the second receiver unit having a third interface to the bus and being operative to decode the multiplexed broadband signal inputs when activated.

3. The system of claim 2, wherein the second receiver unit is activated upon detection of a fault condition.

4. The system of claim 3, wherein each of the first receiver unit and the second receiver unit comprises a plurality of individual receiver modules, each of the individual receiver modules being tunable to a selected frequency, and the activation of the second receiver unit comprises tuning at least one of the individual receiver modules of the second receiver unit to an assigned frequency for a corresponding failed one of the individual receiver modules in the first receiver.

5. The system of claim 4, wherein the broadband signal inputs comprise at least cable television modem signals.

6. The system of claim 1, wherein the data network comprises a connection to the Internet.

7. The system of claim 1, wherein the first interface comprises a plurality of converters capable of converting at least optical signals to electrical signals.

8. The system of claim 1, wherein the broadband signal inputs comprise at least one of Internet Protocol data, telephony data, and video data.

9. The system of claim 4, wherein each of the individual receiver modules is selectively mappable to at least one other of the individual receiver modules.

10. The system of claim 1, wherein the bus comprises a single physical connection.

11. A method for processing signals, comprising:

a) multiplexing a plurality of broadband signal inputs received via a first interface in a multiplexer unit to a bus, the multiplexing being done according to a frequency allocation associating each of the broadband signal inputs with an assigned frequency; and

b) decoding the multiplexed broadband signal inputs in first receiver unit communicating with the bus for communication with a data network.

12. The method of claim 11, further comprising a step of c) providing a second receiver unit, the second receiver unit having a third interface to the bus and being operative to decode the multiplexed broadband signal inputs when activated.

13. The method of claim 12, further comprising a step of d) activating the second receiver unit upon detection of a fault condition.

14. The method of claim 13, wherein each of the first receiver unit and the second receiver unit comprises a plurality of individual receiver modules, each of the individual receiver modules being tunable to a selected frequency, and the activation of the second receiver unit comprises a step of e) tuning at least one of the individual receiver modules of the second

receiver unit to an assigned frequency for a corresponding failed one of the individual receiver modules in the first receiver.

15. The method of claim 14, wherein the broadband signal inputs comprise at least cable television modem signals.

16. The method of claim 11, wherein the data network comprises a connection to the Internet.

17. The method of claim 11, wherein the first interface comprises a plurality of converters capable of converting at least optical signals to electrical signals.

18. The method of claim 11, wherein the broadband signal inputs comprise at least one of Internet Protocol data, telephony data, and video data.

19. The method of claim 14, wherein each of the individual receiver modules is selectively mappable to at least one other of the individual receiver modules.

20. The method of claim 1, wherein the bus comprises a single physical connection.